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Congenital Fibrosarcoma of the Axilla in an Infant

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Malignant soft tissue tumor of the upper extrimity is comparatively rare. Especially, it is difficult to remove the tumor of the axilla because of involving great vessels and nerves. This is a case report of fibrosarcoma observed in the axilla of an infant.

Summary

A case of fibrosarcoma observed in the axilla of an infant was presented. Congenital (infantile) fibrosarcoma is reportedly found in various parts of the body, but one of the axilla is rare. Since axillar region involves many blood vessels and nerves and muscle of the upper extremity, a large tumor cannot easily be removed. In the case of infancy, prognosis is relatively good. Therefore, it is recommended that important nerve and blood vessels keep intact at the first operation and perform resection of the tumor only when recurrence has been observed.

Case Report

D.S. was born at 39 weeks' gestation. His birth weight was 3,500g. At the 4th month after birth, a large tumor was noticed in the right axilla. He was admitted to the Yamagata City Hospital Saiseikan on June 23. Egg-sized, non-movable firm tumor centering around the right axilla extended to the upper arm anteriorly. The movement of the right arm was not limited, nor were there any compressed nerve symptoms.

Hematological examinations revealed RBC $518\times10^4/mm^3$, WBC $13,300/mm^3$, Hb 13.4 g/dl and Ht 40%. Liver function test, renal function test, and the values of serum electrolytes were normal.

X-ray films revealed homogenous shadows of the tumor in the axilla (Fig. 1).

Surgical operation was performed on June 29, 1982. The Axillar tumor, measuring $8\times5\times5$ cm, extended to the coracoid process of right scapula inwardly, to 1/3 of the upper arm outwardly. It involved a part of the plexus brachialis, median nerve, ulnar nerve, and brachial artery.

The tumor was divided into several pieces for removal, so that these nerves and arteries be kept intact. The tumor was heavily infiltrated into the muscle and periosteum of the humerus:

Key words: Fibrosarcoma, Aggressive fibromatosis, Axillary tumor.
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Fig. 1. A plain x-ray film of the right axillar region

Fig. 2. Cut surface of the tumor

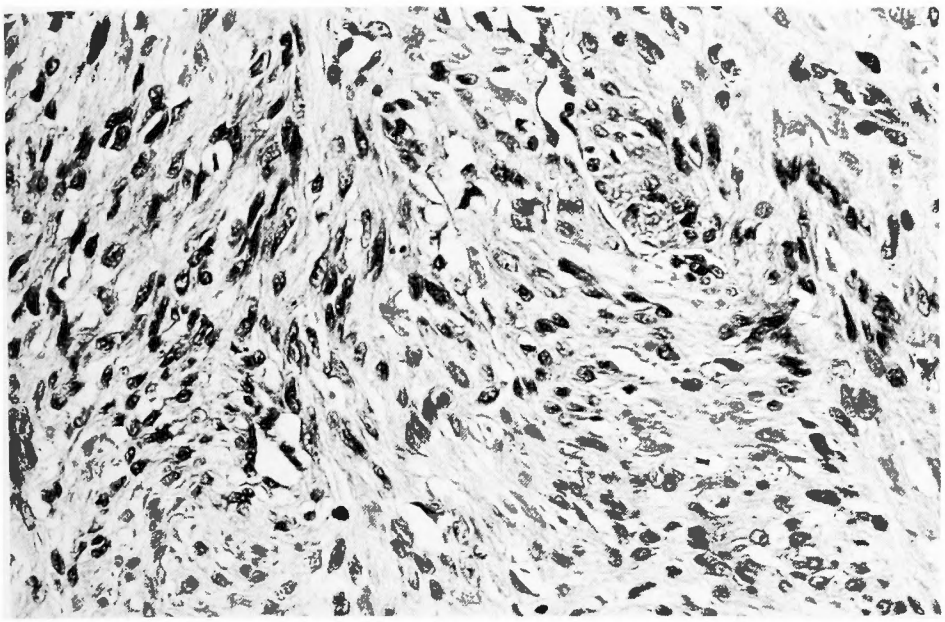

Fig. 3. Photomicrograph of the tumor

these regions were dissected sharply.

The tumor removed was parenchymal, hard and yellowish white, a part of which looked calcified (Fig. 2).

Histological findings showed that the tumor is composed of interlacing bundle of spindle cells. In the cellilar areas, the tumor cells are largely plump and have a fairly high nucleo-cytoplasmic ratio (Fig. 3). The electron microscopy showed the tumor to be fibroblastic. Diagnosis of congenital fibrosarcoma was made on the basis of these findings.

Comment

Congenital (infantile) fibrosarcoma is a rare disease and develops before the age of five in many cases[1,2]. The incidence of this disease is high in the trunk, head and neck, lower extremity followed by the upper extremity[3], while with fibrosarcoma of bone, the incidence is high in the lower extremity including the femur and tibia[4].

The tumor of the axilla usually involves the nerves and blood vessels. Therefore, it is difficult to remove the tumor en bloc. Most of the congenital fibrosarcoma is, however, low-grade fibrosarcoma which is also called aggressive fibromatosis, prognosis being relatively good[1,3,5]. Histologically, the tumor is composed of a bundle of anaplastic plump of spindle-shaped cells. With congenital fibrosarcoma, mitosis and shape of cells are varied in degree[1,6].

Where a tumor extends to the axillary region, involving the nerves and blood vessels as in this case, therefore, it appears preferable to keep the nerves and blood vessels intact and to perform resection every time local recurrence has been observed.

References

1) Chung EB, Enzinger FM: Infantile fibrosarcoma. Cancer **38**: 729-739 (1976).
2) Soule EH, Pritchard DJ: Fibrosarcoma in infants and children. A review of 110 cases. Cancer **40** 1711-1721 (1977).
3) Neifeld JP, Berg JW, Goldwin D, Salzberg AM: A retrospective epidemiologic study of pediatric fibrosarcomas. J Pediatr Surg **13**: 735-739 (1978).
4) Campanacci M, Olmi R: Fibrosarcoma of bone. A study of 114 cases. Ital J Orthop Traumat **3** 199-206 (1977).
5) Iwasaki H, Enjoji M: Infantile and adult fibrosarcomas of the soft tissues. Acta Patho Jap **29**: 377-388 (1979).
6) Mehregan AH: Superficial fibrous tumors in childhood. J Cutan Patho **8**: 321-334 (1981).

和文抄録

乳児の腋窩にみられた線維肉腫の1例

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生来右腋窩部に腫瘍がみられ，4ケ月時に異常に気づいて来院．手術を施行した．腫瘍内を正中神経，尺骨神経が通過しており，腕神経叢の1部も含まれ，また上腕動脈も通過していたが，腫瘍を数ケに分けて切除することにより，これらの神経，血管を温存した．

小児の先天性（幼若性）線維肉腫はまれで，多くは進行が緩徐であり，切除以外に特に抗癌剤投与や照射をする必要のないものが多く，とくに，重要な神経や血管などが含まれている場合は，これらを温存し，もし再発を認めればその都度切除する方法がとられている．